

# IMPEDANCE MATCHING NETWORK AND MULTIDIMENSIONAL ELECTROMAGNETIC FIELD COIL FOR A TRANSPONDER INTERROGATOR

## ABSTRACT OF THE DISCLOSURE

5 An improved interrogator for an inductively coupled identification system is disclosed. The interrogator provides a multidimensional electromagnetic field through a plurality of coils aligned relative to each other. The coils provide a rotating magnetic field having approximately constant amplitude regardless of orientation with respect to the transponder. An additional coil may be utilized to precess the multidimensional  
10 electromagnetic field. The interrogator may further provide an impedance matching network that includes a series drive capacitor to match the impedance of a capacitor in parallel with a coil to a driver load impedance.